Aspect CONSULTING

MEMORANDUM

Project No.: 020027

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To: Lynda Priddy, US EPA

From: Tim Flynn, LHG, CGWP
Principal Hydrogeologist

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Re: **Response to USEPA's Preliminary RCRA Listed Hazardous Waste Designation for the Quendall Terminals Site**

The Respondents have reviewed the USEPA document titled "Quendall Terminals Site, Renton, Washington, RCRA Listed Hazardous Waste Review" dated January 6, 2012 (Review), which describes USEPA's analysis of historical operational areas of the Quendall Terminals Site to identify where RCRA listed waste codes would be applied to waste generated during future Site remedial actions. USEPA's analysis was based on review of regulatory information, available site historical information, and Remedial Investigation (RI) results. The Review concluded that RCRA listed waste codes K035 or U051 are applicable to wastes generated from certain areas of the Site.

The Respondents have reviewed the information considered by USEPA in preparing the Review and believe there is additional information that should be considered when evaluating the applicability of listed waste codes K035 and U051. This memorandum analyzes the potential application of those listed waste codes based on all historical information available at this time.

K035 – Wastewater Treatment Sludges Generated in the Production of Creosote

In the Review, USEPA characterizes wastes that would be generated from the footprint of the North and South Sumps as "K035 - Wastewater Treatment Sludges Generated in the Production of Creosote". However, there is no evidence that historical Site operations included processes that could be characterized as wastewater treatment. Rather, historical records indicate that wastewater from the creosote manufacturing process was discharged directly to the North and South Sumps without treatment.

40 CFR 260.10 defines wastewater treatment sludge as:

> *"...any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant."*

For the K035 listed waste code to apply, the waste must be generated by a wastewater treatment plant. Since no wastewater treatment plant is known to have existed on the Site, the K035 listed waste code would not apply.

U051 – Creosote

In the Review, USEPA identified two areas on the Site where the U051 listed waste code for discarded commercial chemical products, off-specification species, container residues, and spill residues would apply:

- Remediation waste generated from the former May Creek Channel area; and
- Remediation waste generated from the former Trestle/Tank Car Loading area.

More specifically, USEPA identified two specific areas of the May Creek Channel where the U051 listed waste code would apply: 1) downstream of the sanitary sewer outfall, which reportedly received creosote from Still House condenser leaks; and 2) adjacent to product storage Tanks 1 through 5, which reportedly received product tank cleanout wastes. Additional information relevant to the designation of waste from the two specific areas of the May Creek Channel and the Trestle/Tank Car Loading area is discussed separately below.

Former May Creek Channel – Sanitary Sewer Outfall

Historical information concerning discharges from the sewer outfall to the May Creek Channel came from interviews of the former plant manager Ward Roberts. When Mr. Roberts used the term 'creosote' in his discussion of Site discharges and spills, he was referring to more than just commercial grade creosote product. For instance, in his report on the Lake Washington T-Dock spill (Roberts, Undated), he refers to the spilled material as creosote, even though it is raw material being offloaded for processing and not the finished product. When Mr. Roberts discussed discharges of 'creosote' from the sewer outfall to the May Creek Channel, he could have been referring to any raw material, by product or finished product from the manufacturing process.

As noted in the Review concerning the Comment for 40 CFR 261.33, a commercial chemical product

> *"refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. It does not refer to a material, such as a manufacturing process waste . . . ."*

Wastes discharged through the sewer line from the Still House condensers (i.e., during the manufacturing process) would not be U051 listed wastes because they were manufacturing process wastes, not commercial chemical products. Therefore, remediation wastes from the portion of the May Creek Channel at and downstream of the former outfall would not be U051 listed wastes.

Former May Creek Channel – Adjacent to Tanks 1 through 5

The area of the former May Creek Channel adjacent to Tanks 1 through 5 was used for transfer and storage of coal tar raw materials and/or other products. During the early years of creosote manufacturing, Tanks 1 through 5 were the only above-ground storage tanks (ASTs) on the Site (as indicated on the 1918 plant map) and during that time, these ASTs would have held not only the creosote product but also coal tar raw material and the light-end distillate products. This area

of the May Creek Channel may also contain tank cleaning residues, based on information provided by Mr. Roberts (Ecology, 1989): "Contamination is also all along the old bed of May Creek (from cleaning of above-ground tanks), where we should find both tars and distillates." Finally, chemical data and field observations from this area indicates the presence of non-creosote products, including elevated benzene concentrations at well BH-25A and highly viscous, semi-solid tar at Trench T-7.

For wastes generated from this area to be a U051 listed waste, they would need to be distinguishable as creosote that consists of the commercially pure grade of the chemical, a technical grade of the chemical that is produced or marketed, or a formulation in which the chemical is the sole active ingredient.

It is very difficult to visually discriminate between creosote and coal tar present in soil[1] and existing data indicate that raw materials, by-products and/or distillate products other than creosote are present in this portion of the former May Creek Channel. Given the historical storage and transfer of multiple materials with similar chemical makeup in this area, it will be very difficult to identify remediation wastes that contain commercial grade creosote. When the source of contamination is uncertain, the lead agency may assume that the contaminants are not listed RCRA hazardous wastes, as discussed in the preambles for the proposed and final National Contingency Plan (see 53 FR 41444, December 21, 1988 for the proposed NCP preamble discussion; 55 FR 8758, March 13, 1990 for the final NCP preamble discussion). As a result, remediation waste generated from the former May Creek Channel area adjacent to former Tanks 1 through 5 should not be designated as U051 listed waste.

Trestle/Tank Car Loading Area

The Review stated that the Trestle/Tank Car Loading Area was an area 'where operations were primarily focused on creosote product (and not coal tar raw material)' but this area was also used for loading of coal tar raw materials and other products. As indicated on the 1918 plant map, there were coal tar transfer lines in this area. Furthermore, chemical data from this area, including elevated benzene concentrations in soil and groundwater at wells Q4 and Q9, indicate the presence of raw materials, by-products and/or distillate products other than creosote. Historical reports of spillage in this area did not specify what was spilled.

For wastes generated from this area to be U051 listed wastes, they would need to be distinguishable as creosote that consists of the commercially pure grade of the chemical, a technical grade of the chemical that is produced or marketed, or a formulation in which the chemical is the sole active ingredient. Existing data indicate that raw materials, by-products and/or distillate products other than creosote are present in the Trestle/Tank Car Loading area. Given the historical storage and transfer of multiple materials with similar chemical makeup in this area, it will be very difficult to identify remediation wastes that contain commercial grade creosote. As a result, remediation waste generated from the Trestle/Tank Car Loading area should not be designated as U051 listed waste.

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[1] In the Review, USEPA states that 'creosote is more fluid than coal tar; coal tar visually looks like a thick (viscous) tar substance.' However, this is not necessarily true of the wide variety of tars used at the Quendall Site including oil-gas tar and water-gas tar (collectively referred to as coal tar).

Conclusions

Based on historical information and analytical data presented in the RI, the Respondents conclude the following:

- Remediation waste generated from the former May Creek Channel should not be designated K035 listed waste because no wastewater treatment occurred on the Site.
- Remediation waste generated from the former sewer outfall in the former May Creek Channel should not be designated U051 listed waste because manufacturing process wastes (not commercial chemical products) were reportedly discharged there.
- Remediation waste generated from the Trestle/Tank Car Loading area and the former May Creek Channel adjacent to Tanks 1 through 5 should not be designated U051 listed waste because the source of contamination in these areas is uncertain. For wastes generated from this area to be U051 listed wastes, they would need to be distinguishable as creosote that consists of the commercially pure grade of the chemical, a technical grade of the chemical that is produced or marketed, or a formulation in which the chemical is the sole active ingredient. Existing data in these areas indicate the presence of raw materials, by-products and/or distillate products other than creosote. Given the historical storage and transfer of multiple materials with similar chemical makeup in these areas, it will be very difficult to identify remediation wastes that contain commercial grade creosote.

References

Ecology, 1989, Employee Interview with Ward Roberts, July 26, 1989, Memorandum dated October 19, 1989.

Roberts, Undated, History of Reilly Tar Refinery at Quendall from 1914, by Walter W. Roberts, Oil Storage Manager, Quendall Terminals.

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